

## AMENDMENT(S) TO THE CLAIMS

1. (Original) A sprinkler, comprising:

an outer housing having a lower end connectable to a source of pressurized water;  
a riser vertically reciprocable along a vertical axis within the outer housing between  
extended and retracted positions when the source of pressurized water is turned ON and OFF;  
a nozzle mounted at an upper end of the riser for rotation about the vertical axis;  
a turbine mounted inside the riser for rotation about a horizontal axis; and  
a drive mechanism connecting the turbine to the nozzle so that when the source of  
pressurized water is turned ON the resulting rotation of the turbine by the pressurized water will  
rotate the nozzle.

2. (Original) The sprinkler of Claim 1 wherein the drive mechanism includes a  
reversing mechanism for causing the nozzle to rotate between a pair of arc limits.

3. (Previously Amended) The sprinkler of Claim 2 and further comprising a  
mechanism that allows a least one of the arc limits to be adjusted.

4. (Previously Amended) The sprinkler of Claim 1 wherein the turbine includes a  
disk and a plurality of equally circumferentially spaced cups formed on the periphery of the disk.

5. (Original) The sprinkler of Claim 1 wherein the turbine and a drive mechanism  
that connects the turbine to the nozzle are mounted inside a pair of clam-shell case members  
inside the riser.

6. (Original) The sprinkler of Claim 5 wherein the drive mechanism includes a gear  
train reduction including a plurality of gears that rotate about a plurality of corresponding  
horizontal axes.

7. (Original) The sprinkler of Claim 5 wherein at least one of the case members  
2 defines a water inlet.

8. (Original) The sprinkler of Claim 1 and further comprising a manually adjustable  
2 stator for varying a rotational speed of the turbine.

9. (Original) The sprinkler of Claim 1 and further comprising a first filter for  
2 straining all water flowing into the lower end of the outer housing and a second filter for straining  
a portion of the water flowing past the turbine.

10. (Original) The sprinkler of Claim 5 wherein the drive mechanism includes a  
2 reversing mechanism mounted inside the claim-shell case members that causes the nozzle to  
rotate between a pair of arc limits.

11. (Previously Amended) A sprinkler, comprising:  
2 an outer housing having a lower end connectable to a source of pressurized water;  
a riser vertically reciprocable along a vertical axis within the outer housing between  
4 extended and retracted positions when the source of pressurized water is turned ON and OFF;  
a nozzle mounted at an upper end of the riser for rotation about the vertical axis;  
6 a plurality of mating case members dimensioned to fit inside the riser;  
a turbine entirely mounted inside the case members; and  
8 a drive mechanism including a reversing mechanism and an over-center mechanism that  
shifts the reversing mechanism, the drive mechanism being mounted inside the case members that  
10 connects the turbine to the nozzle so that when the source of pressurized water is turned ON the  
resulting rotation of the turbine by the pressurized water will rotate the nozzle between a pair of  
12 arc limits.

12. (Canceled)

13. (Original) The sprinkler of Claim 11 and further comprising a mechanism that  
2 allows a least one of the arc limits to be adjusted.

14. (Previously Amended) The sprinkler of Claim 11 wherein the turbine includes a  
2 disk and a plurality of equally circumferentially spaced cups formed on the periphery of the disk.

15. (Original) The sprinkler of Claim 11 wherein the turbine rotates about a horizontal  
2 axis.

16. (Original) The sprinkler of Claim 11 wherein the drive mechanism includes a gear  
2 train reduction including a plurality of gears that rotate about a plurality of corresponding  
horizontal axes.

17. (Original) The sprinkler of Claim 11 wherein at least one of the case members  
2 defines a water inlet.

18. (Canceled)

19. (Original) The sprinkler of Claim 11 and further comprising a first filter for  
2 straining all water flowing into the lower end of the outer housing and a second filter for straining  
a portion of the water flowing past the turbine.

20. (Original) A sprinkler, comprising:  
2 an outer housing having a lower end connectable to a source of pressurized water;  
a riser vertically reciprocable along a vertical axis within the outer housing between  
4 extended and retracted positions when the source of pressurized water is turned ON and OFF;  
a nozzle mounted at an upper end of the riser for rotation about the vertical axis;  
6 a plurality of mating case members dimensioned to fit inside the riser, at least one of the  
case members defining a water inlet and a water outlet;

8 a turbine mounted inside the case members receiving water passing through the inlet for  
powered rotation about a first horizontal axis;

10 a drive mechanism mounted inside the case members that connects the turbine to the  
nozzle so that when the source of pressurized water is turned ON the resulting rotation of the  
12 turbine by the pressurized water will rotate the nozzle, the drive mechanism including a gear  
train reduction having a plurality of gears that rotate about a plurality of corresponding second  
14 horizontal axes and a reversing mechanism for causing the nozzle to rotate between a pair of arc  
limits; and

16 a manually adjustable stator for varying a rotational speed of the turbine.

21-30 (Canceled)

31. (Previously Presented) A sprinkler, comprising:

2 an outer housing having a lower end connectable to a source of pressurized water;  
a riser vertically reciprocable along a vertical axis within the outer housing between  
4 extended and retracted positions when the source of pressurized water is turned ON and OFF;  
a nozzle mounted at an upper end of the riser for rotation about the vertical axis;  
6 a plurality of mating case members dimensioned to fit inside the riser;  
a turbine entirely mounted inside the case members;  
8 a drive mechanism mounted inside the case members that connects the turbine to the  
nozzle so that when the source of pressurized water is turned ON the resulting rotation of the  
10 turbine by the pressurized water will rotate the nozzle; and  
a manually adjustable stator for varying a rotational speed of the turbine.

32. (Previously Presented) A sprinkler, comprising:

2 an outer housing having a lower end connectable to a source of pressurized water;  
a riser vertically reciprocable along a vertical axis within the outer housing between  
4 extended and retracted positions when the source of pressurized water is turned ON and OFF;  
a nozzle mounted at an upper end of the riser for rotation about the vertical axis;

- 6 a self-contained drive subassembly mounted inside the riser and entirely enclosing a  
turbine and a drive mechanism that connects the turbine to the nozzle so that when the source of  
8 pressurized water is turned ON the resulting rotation of the turbine by the pressurized water will  
rotate the nozzle; and  
10 a manually adjustable stator for varying a rotational speed of the turbine.